

ABSTRACT

A device for protecting an electrical power distribution network against the overvoltages due to a lightning strike is disclosed herein. The device comprises a first electrode electrically coupled to the electrical power distribution network, a second electrode connected to a grounding conductor, focusing means capable of guiding an electric arc generated between the two electrodes toward a fractionation device, and a casing. The casing accommodates the two electrodes, the focusing means and the fractionation device. The casing is in communication with the outside through at least one discharge channel designed to substantially lower the temperature of the gases generated by the formation of the electric arc, wherein each discharge channel has at least one change of section.